

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

1. (currently amended) A balloon catheter assembly comprising:
a first tubular member having a proximal portion and a distal portion with a lumen extending between the proximal portion and the distal portion;
a balloon having a proximal waist length, a distal waist length and an expandable region therebetween disposed about the distal portion; and
a tie layer disposed between the proximal waist length or distal waist length and the first tubular member, wherein the tie layer comprises a polyester polymer layer disposed on a polyamide polymer layer, the polyamide layer disposed between the polyester layer and the first tubular member;
wherein the polyamide layer possesses a greater bonding affinity for the first tubular member than does the polyester layer; and
wherein the polyester layer possesses a greater bonding affinity for the balloon than does the polyamide layer.
2. (original) The balloon catheter assembly according to claim 1, wherein the balloon is formed from an aromatic polyester.
3. (original) The balloon catheter assembly according to claim 1, wherein the balloon is formed from a polyethylene terephthalate.
4. (original) The balloon catheter assembly according to claim 1, wherein the tubular member is formed from a polyamide.
5. (original) The balloon catheter assembly according to claim 1, wherein the tubular member is formed from a polyether block amide.

6-7. (canceled)

8. (previously presented) The balloon catheter assembly according to claim 1, wherein the polyamide layer comprises a copolymer of polyester and polyamide.

9. (previously presented) The balloon catheter assembly according to claim 1, wherein the polyester layer comprises a polybutylene terephthalate.

10. (currently amended) A balloon catheter assembly comprising:
a first polyamide tubular member having a proximal portion and a distal portion with a lumen extending between the proximal portion and the distal portion;
a polyethylene terephthalate balloon having a proximal waist length, a distal waist length and an expandable region therebetween disposed about the distal portion;
a first tie layer disposed adjacent the first tubular member; and
a second tie layer disposed between the proximal waist length or distal waist length and the first tie layer, wherein the first tie layer comprises a polyamide polymer and the second tie layer comprises a polyester polymer;
wherein the first tie layer possesses a greater bonding affinity for the first tubular member than does the second tie layer; and
wherein second tie layer possesses a greater bonding affinity for the balloon than does the first tie layer.

11. (previously presented) The balloon catheter assembly according to claim 10, wherein at least one of the first and second tie layers further comprises a copolymer of polyester and polyamide.

12-13. (canceled)

14. (previously presented) The balloon catheter assembly according to claim 10, wherein the second tie layer comprises a polybutylene terephthalate.

15. (currently amended) A method for improved bonding between an expandable balloon and a catheter shaft, the method comprising the steps of:

providing a first polyamide tubular member having a proximal portion and a distal portion with a lumen extending between the proximal portion and the distal portion;

disposing a first tie layer on the distal portion of the first polyamide tubular member, wherein the first tie layer comprises a polyamide polymer;

disposing a second tie layer on the first tie layer, wherein the second tie layer comprises a polyester polymer; and

disposing a polyethylene terephthalate balloon having a proximal waist length, a distal waist length and an expandable region therebetween on the second tie layer;

wherein the first tie layer possesses a greater bonding affinity for the first tubular member than does the second tie layer; and

wherein the second tie layer possesses a greater bonding affinity for the balloon than does the first tie layer.

16. (previously presented) The method according to claim 15, wherein at least one of the first and second tie layers comprises a copolymer of polyester and polyamide layer.

17-18. (canceled)

19. (previously presented) The method according to claim 15, wherein disposing the second tie layer comprises disposing a layer comprising polybutylene terephthalate.

20. (original) The method according to claim 15, further comprising applying heat to the distal or proximal waist portion effective to bond the waist portion to the tubular member.